

Title (en)
STRIP CASTING OF IMMISCIBLE METALS

Title (de)
BANDGIESSUNG UNMISCHBARER METALLE

Title (fr)
COULAGE EN BANDE DE MÉTAUX NON MISCIBLES

Publication
EP 2142324 B1 20160907 (EN)

Application
EP 08799790 A 20080411

Priority
• US 2008060050 W 20080411
• US 73411307 A 20070411

Abstract (en)
[origin: US2008251230A1] The present invention discloses a method of strip casting an aluminum alloy from immiscible liquids that yields a highly uniform structure of fine second phase particles. The results of the present invention are achieved by using a known casting process to cast the alloy into a thin strip at high speeds. In the method of the present invention, the casting speed is preferably in the region of about 50-300 feet per minute (fpm) and the thickness of the strip preferably smaller than 0.08-0.25 inches. Under these conditions, favorable results are achieved when droplets of the immiscible liquid phase nucleate in the liquid ahead of the solidification front established in the casting process. The droplets of the immiscible phase are engulfed by the rapidly moving freeze front into the space between the Secondary Dendrite Arms (SDA).

IPC 8 full level
B22D 11/06 (2006.01); **B22D 11/10** (2006.01); **C22C 21/00** (2006.01)

CPC (source: EP US)
B22D 11/0605 (2013.01 - EP US); **B22D 11/112** (2013.01 - EP US); **B22D 25/06** (2013.01 - EP US); **C22C 21/00** (2013.01 - EP US)

Citation (examination)
US 2003205357 A1 20031106 - UNAL ALI [US]

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)
US 2008251230 A1 20081016; US 8403027 B2 20130326; AU 2008240265 A1 20081023; BR PI0810531 A2 20141021; BR PI0810531 B1 20160830; CA 2683966 A1 20081023; CA 2683966 C 20121016; CN 101678444 A 20100324; CN 101678444 B 20121226; EP 2142324 A1 20100113; EP 2142324 B1 20160907; ES 2606217 T3 20170323; JP 2010523338 A 20100715; JP 5335767 B2 20131106; KR 101554748 B1 20150921; KR 20100016381 A 20100212; MX 2009010939 A 20091102; RU 2009141598 A 20110520; RU 2453394 C2 20120620; US 2013216426 A1 20130822; WO 2008128055 A1 20081023; ZA 200907379 B 20100728

DOCDB simple family (application)
US 73411307 A 20070411; AU 2008240265 A 20080411; BR PI0810531 A 20080411; CA 2683966 A 20080411; CN 200880018209 A 20080411; EP 08799790 A 20080411; ES 08799790 T 20080411; JP 2010503236 A 20080411; KR 20097023407 A 20080411; MX 2009010939 A 20080411; RU 2009141598 A 20080411; US 2008060050 W 20080411; US 201313847737 A 20130320; ZA 200907379 A 20091021